

IN THE CLAIMS:

Please cancel claims 20-25 and amend the claims as follows:

1. (Previously Presented) A method for forming a stacked barrier layer on a substrate disposed in a processing chamber, comprising:  
    serially exposing said substrate to first and second reactive gases to form an adhesion layer; and  
    serially exposing said adhesion layer to third and fourth reactive gases to form a barrier layer adjacent to said adhesion layer.

2. (Original) The method as recited in claim 1 further including depositing a layer of copper adjacent to said barrier layer.

3. (Original) The method as recited in claim 1 further including repeating serially exposing said substrate to first and second reactive gases to form said adhesion layer to a desired thickness before serially exposing said adhesion layer to third and fourth reactive gases.

4. (Original) The method as recited in claim 3 further including repeating serially exposing said substrate to third and fourth reactive gases to form said barrier layer to a desired thickness after serially exposing said substrate to first and second reactive gases.

5. (Original) The method as recited in claim 1 further including providing first and second processing chambers wherein serially exposing said substrate to first and second reactive gases further includes serially exposing said substrate to said first and second reactive gases while said substrate is disposed in said first processing chamber and serially exposing said adhesion layer to third and fourth reactive gases further includes serially exposing said adhesion layer to third and fourth reactive gases while said substrate is positioned in said second processing chamber.

6. (Original) The method as recited in claim 3 further including providing first and second processing chambers wherein serially exposing said substrate to first and

second reactive gases further includes serially exposing said substrate to said first and second reactive gases while said substrate is disposed in said first processing chamber and serially exposing said adhesion layer to third and fourth reactive gases further includes serially exposing said adhesion layer to third and fourth reactive gases while said substrate is positioned in said first processing chamber and depositing a layer of copper adjacent to said barrier layer further includes depositing a copper layer adjacent to said barrier layer when said substrate is positioned in said second processing chamber.

7. (Currently Amended) The method as recited in claim [[3]] 1 further including providing first, second and third processing chambers wherein serially exposing said substrate to first and second reactive gases further includes serially exposing said substrate to said first and second reactive gases while said substrate is disposed in said first processing chamber and serially exposing said adhesion layer to third and fourth reactive gases further includes serially exposing said adhesion layer to third and fourth reactive gases while said substrate is positioned in said first processing chamber and depositing a layer of copper adjacent to said barrier layer further includes depositing a copper layer adjacent to said barrier layer when said substrate is positioned in said third processing chamber.

8. (Original) The method as recited in claim 1 wherein serially exposing said substrate further includes introducing said second reactive gas into said processing chamber and further including purging said processing chamber of said second reactive gas before exposing said adhesion layer to said third reactive gas.

9. (Original) The method as recited in claim 1 wherein said first and third gases each includes a refractory metal compound, with the refractory metal compound associated with said first reactive gas differing from the refractory metal compound associated with said third reactive gas.

10. (Currently Amended) The method as recited in claim 1 wherein said first reactive gas is selected from the group consisting essentially of TDMAT, TDEAT and